



# Telemetry Group

## Recorder and Reproducer Committee

### RCC-TG Progress on Recorder Standards

23 October 2002

International Telemetry Conference  
San Diego, California

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# Recorder/Reproducer Committee

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- PURPOSE
  - Address telemetry standards and test methods associated with data recorders, media, multiplexers, and reproducers
- RESPONSIBILITY
  - IRIG 118, VOL III
  - IRIG 106, Chapters 6 & 7, Appendices D, G, L
  - IRIG 106, Chapter 10 (Pinksheet)
  - IRIG 106, Part II, Chapter 5 (To be accomplished)
  - IRIG 107



# Recorder/Reproducer Committee

## MEMBERSHIP

|  |               |
|--|---------------|
| Space and Missile System Center (Vandenberg AFB)   | Ken           |
| Schoeck  |               |
| Air Force Flight Test Center (Edwards AFB)         | Tim           |
| Chalfant   |               |
| Air Combat Command (Eglin AFB)                     | Al Berard     |
| Gulf Test Range (Tyndall AFB)                      | Jeff          |
| Heckerson  |               |
| Naval Air Warfare Center (Aircraft Div, Pax River) | Joe           |
| Lloyd  |               |
| Naval Air Warfare Center (Weapons Div, Pt. Mugu)   |               |
| Rolando Chinea                                     |               |
| Naval Sea Warfare Center (Port Hueneme)            |               |
| Jose Martinez                                      |               |
| NASA (Goddard Space Flight Center)                 | Bill Poland   |
| PMRF (Kaui)  | Gordon Mattos |



# Current Standards

## IRIG 106, Chapter 6

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- **Instrumentation Magnetic Tape**
- **Longitudinal Analog Recorders**
- **ID-1 Digital Cassette Recorders**
- **VLDS Digital Cassette Recorders**
- **Solid State Recorders**
- **ADARIO Mux/Demux**
- **ARMOR Mux/Demux**



# New Standards

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- TG 47 Recorder Command and Control Mnemonics  
IRIG 106, Chapter 6 Section 18  
(Pinksheet)
- TG 56 SSR - IRIG 106, Chapter 10 (Pinksheet)
- TMATS Addendum - IRIG 106, Chapter 9  
(Pinksheet)
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# Command and Control Mnemonics

## Proposed Addition to IRIG 106, Chapter 6

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TG47

- Command and Control Mnemonics
  - Any Type of Data Recorder
    - tape
    - solid state
    - optical
  - Slanted to Benefit Range Operators
  - Common Command Set
  - Device Specific Commands



# Solid-State Recorders Interface

# Proposed Addition to IRIG 106, TG 56 Chapter 6

- Input/Output Interfaces/Protocols
  - Device Packaging
  - Recommendations on Interconnection and Module Packaging for a Standard Solid-State Recorder
  - Data Format
  - Status:
    - Following STANAG 4575 (in NATO Ratification cycle)
    - Updating IRIG 106 with a new chapter - Chapter 10
    - Pink sheet in range and industry review



# Solid-State Recorder Standard

## Proposed Addition to IRIG 106, Chapter 10

- Fiber Channel as download means or mechanism
- Data File Structures
- Index File
- Packet Structure Definition
- User Defined Message Types
- Clock Rates
- Video Compression and Transmission
- TMATS Issues
  - Pink sheet in committee review



## New TASKS UNDER CONSIDERATION

- Disk Based Recorder Study
  - File Formats
    - FAT32
    - NTS
- TMATS Registry Process
  - Vendor Specific Device Attributes



# Future Activities

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- Committee Realignment
- New Technologies
  - Higher capacities, transfer rates, smaller size
  - COTS Devices
  - Advanced Technologies
    - Opticals, Crystals, Proteins
    - Molecular, Nano-Tubuals
- DoD Ranges must be able to interoperate



# FUTURE DIRECTION for Recorders and Reproducers

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- The committee is in need of help
- Ranges: studies, future scan, and committee work
- Industry: assistance, technology concepts, direction  
Please contact myself or a member in your area if interested in joining these efforts.